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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/674,868	01/03/2001	Eiichi Nagasaka	P4970b	7093

20178 7590 03/30/2004

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EXAMINER


GOODWIN, JEANNE M

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 09/674,868	<b>Applicant(s)</b> NAGASAKA ET AL.	
	<b>Examiner</b> Jeanne-Marguerite Goodwin	<b>Art Unit</b> 2841	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 November 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 26-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/9/01 and 11/6/00</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 26-34, 36, 37, 39-41, 44 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 3,579,974 to Schmidt [hereinafter Schmidt].

Schmidt discloses an electronically-controlled drive mechanism for clocks having a startup member comprising a rotor wheel/rotation target gear (7) having a driving pinion (9) comprising tongues/engaged portion (8) which are magnetically excited via oscillating coil having a yoke (16), wherein the start of the driving system is accomplished such that a free end of a fixed starter spring/engaging portion (23) is connected to the first translating gear (24) or on the second translating gear and meshes or engages in any desired cog of the gear (24), upon the disengagement of a corresponding lever (25), causes the gear (24) and therewith the rotor wheel (7) to assume a suitable speed of rotation and two driving oscillator coils/external operating member (5/6) which apply a rotating force to the rotor wheel/rotation target gear (7), while the starter spring/engaging portion (23) is in engagement with the tongues/engaged portion (8), . Furthermore, the starting spring may, of course, also be connected directly to the rotor wheel (7). The automatic start of the rotor wheel (7) may be effected, for example, by means of a slowly increasing switching frequency up to the theoretical

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frequency, and by subsequently continuing the further operation with the aid of the generator. Moreover, the starter spring/engaging portion (23) is moved substantially in a tangential direction relative to a peripheral portion of the rotor wheel/rotation target gear (7).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt.

Schmidt discloses a device as stated above with regards to claims 26-34, 36, 37, 39-41, 44 and 45. Schmidt discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 35, i.e., the startup spring being a leaf spring.

With respect to the limitation stated in claim 35: the use of the particular type of startup spring claimed by applicant, i.e., leaf spring, absent any criticality, is considered to be nothing more than a choice of engineering skill, choice of design because 1) neither non-obvious nor unexpected results, i.e., results which are different in kind and not in degree from the results of the prior art, will be obtained as long as the spring serves to start the rotor as already suggested by Schmidt, 2) the startup spring claimed by applicant and the startup spring used by Schmidt are well known alternate types of springs which will perform the same function, if one is replaced with the other, of starting the rotor, and

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3) the use of this particular type by applicant is considered to be nothing more than the use of one of numerous and well known alternate types of springs that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to start the rotor as already suggested by Schmidt.

5. Claim 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of US Patent 5,923,619 to Knapen et al. [hereinafter Knapen].

Schmidt discloses a device as stated above with regards to claims 26-34, 36, 37, 39-41, 44 and 45. Schmidt discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 38, i.e., the external operating member is a crown.

With respect to the limitation stated in claim 38: Knapen discloses a generator using a winding knob or push button in order to manually drive a rotor wheel (4). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the winding knob or push button assembly, as taught by Knapen, to the rotor wheel of Schmidt, wherein this way of driving can be used for recharging as already suggested by Knapen.

6. Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of US Patent 6,483,276 to Shimizu et al. [hereinafter Shimizu].

Schmidt discloses a device as stated above with regards to claims 26-34, 36, 37, 39-41, 44 and 45. Schmidt discloses all the subject matter claimed by applicant with the exception of the limitation stated in claim 42, i.e., the rotor includes an inertia plate; and

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the limitation stated in claim 43, i.e., the inertia plate being attached to a rotating shaft of the rotor.

With respect to the limitation stated in claims 42 and 43: Shimizu discloses an electric power generator comprising a rotor (12) and a rotor inertia disk (12c) attached to a rotating shaft of the rotor (12) (see Fig. 3), wherein the rotor inertia disk (12c) serves to minimize the variation in the rotational speed of the rotor (12) caused by a variation in the driving torque. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add rotor inertia disk, as taught by Shimizu, to the rotor of Schmidt to minimize the variation in the rotational speed of the rotor (12) caused by a variation in the driving torque.

7. Claims 46, 48, 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of Shimizu.

Schmidt discloses a device as stated above with regards to claims 26-34, 36, 37, 39-41, 44 and 45. Schmidt discloses all the subject matter claimed by applicant with the exception of the limitations stated in claims 46 and 50, i.e., the rotation controller and the hands driven under control of the rotation controller

With respect to the limitations stated in claims 46 and 50: Furthermore, Shimizu discloses a rotational controller driven by the electric energy so as to control rotation period of the electric power generator so that the clock hands connected to a wheel train are precisely driven to indicate precise time. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add the rotational controller/hand assembly, as taught by Shimizu, to the generator of Schmidt, in

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order to control the rotation period of the electric power generator so that the clock hands connected to a wheel train are precisely driven to indicate precise time as already suggested by Shimizu.

8. Claim 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of Shimizu and US Patent 4,939,707 to Nagao.

Schmidt discloses a device as stated above with regards to claims 26-34, 36, 37, 39-41, 44 and 45. Schmidt discloses all the subject matter claimed by applicant with the exception of the limitations stated in claim 47, i.e., a transmission wheel train, hands being driven by the transmission wheel train and an accumulator.

With respect to the limitations stated in claim 47, i.e., a transmission wheel train and hands being driven by the transmission wheel train : More specifically, Shimizu teaches using an electric power generator, driven by the mechanical energy source connected to the electric power generator via an energy transmission device such as a wheel train, for generating electric power by means of induction and supplying resulting electrical energy, wherein the hands are connected to the energy transmission device so as to indicate time. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add transmission device, as taught by Shimizu, to the generator of Schmidt, in order for the mechanical energy source to be converted to electric power as already suggested by Shimizu.

With respect to the limitations stated in claim 47, i.e., an accumulator: Nagao discloses an electronic wristwatch with an electric generator using an accumulator charging capacitor (45) in order of assuring the continuous operation of the watch should

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the primary source be rendered inactive. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add accumulator, as taught by Nagao, to the generator of Schmidt, in order to assure the continuous operation of the watch should the primary source be rendered inactive.

### ***Inventorship***

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### ***Conclusion***

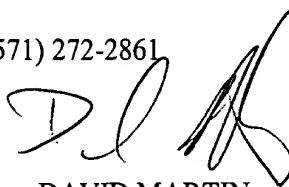
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 disclose related devices. US Patent 6,441,516 to Kaelin et al. discloses a power generator having an accumulator.

11. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Examiner Jeanne-Marguerite Goodwin whose telephone number is (571) 272-2104. The examiner can normally be reached on Monday-Friday



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(9am-6pm), alternate Fridays off. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2861.

A handwritten signature in black ink, appearing to read 'D. Martin', is positioned above the printed name of the signatory.

JMG  
March 22, 2004

DAVID MARTIN  
SUPERVISORY PATENT EXAMINER  
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